

REMARKS

The Examiner's communication dated September 25, 2007 has been received and carefully considered. In conformance with the applicable statutory requirements, this paper constitutes a complete reply and/or a bona fide attempt to advance the application to allowance. Specifically, claims 37 and 46 have been amended and new claims 175 and 176 have been added. Reexamination and/or reconsideration of the application as amended are respectfully requested.

Summary of the Office Action

Claims 22, 33, 34, 49 and 52 were indicated as containing allowable subject matter.

Claims 13-21, 23-32, 35-48, 50, 51, 53 and 174 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Kelsey (U.S. Patent No. 5,967,289) in view of Piron (U.S. Patent No. 6,419,073).

The Claims Distinguish Patentably Over the Reference(s) of Record

Independent Claim 13 and its Dependent Claims: Claim 13 calls for a sortation conveyor comprising a plurality of divert guide paths, wherein each divert guide path comprises an arcuate section having an entrance, said entrance being disposed at a divert angle of less than 20°. It is respectfully submitted that the references of record (including the combination of Kelsey and Piron) fail to disclose or fairly suggest the sortation conveyor recited in claim 1. In addition, it is respectfully submitted that the combination of Kelsey and Piron is improper made.

In particular, the Examiner concedes that Kelsey (the primary reference applied against claim 1) fails to specifically disclose divert angles that are less than 20° and concedes that Kelsey fails to show a divert guide path having an arcuate portion. Attempting to correct these deficiencies, the Examiner asserts that the alleged teaching in Kelsey of guide paths having an entrance disposed at an angle of "not more than about 20°" renders it "inherently obvious" that angles less than 20° are contemplated by Kelsey. Additionally, the Examiner argues that an arcuate guide portion 22 taught in Piron (the Examiner's secondary reference applied against

claim 1) would have been obvious to one skilled in the art to have been included on Kelsey “as it is well known that an arcuate transition provides for a smoother divert of articles.”

The indication in Kelsey that rails 36 are positioned at an angle 37 of no more than about 20° relative to the direction of conveyor movement does not fairly suggest a divert guide path having an arcuate portion having an entrance, wherein the entrance is disposed at a divert angle of less than 20°. Moreover, whether or not it is inherently obvious that angles less than 20° are contemplated by Kelsey, Applicants argue that there is no teaching or fair suggestion of an entrance of an arcuate portion of a divert guide path being disposed at a divert angle of less than 20°. In other words, it is irrelevant that the linear section 36 in Kelsey is purportedly contemplated to be less than 20° because this section is not an entrance of an arcuate portion of a divert guide path.

In addition, the Examiner’s purported rationale supporting a modification of the teachings of Kelsey with the teachings of Piron is insufficient and improper. More particularly, the Examiner has not provided a fair reason or explicit analysis of why the disclosures of the references of Kelsey and Piron should be combined. Instead, the combination applied against claim 13 appears to be a classic case of hindsight reasoning. There is simply no suggestion to combine the teachings and suggestions of Kelsey and Piron as advanced by the Examiner, except from using the subject application as a template for a hindsight reconstruction of claim 13. As *KSR* made clear, rejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.

The Examiner’s attempted reasoning that including an arcuate portion, such as taught by Piron, on the sortation conveyor of Kelsey would have been obvious to one of ordinary skill because it is well known that an arcuate transition provides for a smoother divert of articles is totally unsupported. Moreover, the conveyors of Piron and Kelsey are incongruous. Specifically, Piron relates to a conveyor that employs platens to carry articles. Articles on the conveyor of Piron are realigned with a desired exit conveyor located at the end of the conveyor (a 0° angle). The realignment occurs by moving the platen or platens on which an article is supported and carried. The article is always in contact with the platens, so there is no initial contact zone. The article is always under control of the platens while on the conveyor engagement, and the known S curve is configured to avoid turning the article to avoid

mispositioning of the article. In contrast, the sortation conveyor of Kelsey uses pushers to selectively move into a side of a carried article and forcibly divert the article. The Examiner states that it would be obvious to modify the arrangement of Kelsey with the arcuate sections of Piron because such arcuate transition will provide for a smoother divert of articles, but no support for this conclusory allegation is provided.

The combination of Piron and Kelsey appears to be entirely based on hindsight reasoning. As KSR clearly indicates, “a fact finder should be aware, of course, of the distortion caused by hindsight bias and must be cautious of argument relying upon ex post reasoning.” While motivation may not still be required for an obviousness rejection, the Examiner is required to articulate reasoning with some rational underpinning. A combination or modification is not obvious simply because the Examiner says it is so. Indicating that it would be obvious to modify the sortation conveyor of Kelsey to include an arcuate portion such as disclosed in Piron is entirely conclusory, and the statement that it is well known that an arcuate transition provides for a smoother divert of articles is entirely unsupported (except through reading the subject application under examination).

Still further, there is a teaching away inherent in Kelsey as to why one skilled in the art would not use divert angles of less than 20° for a divert guide path. Divert guide paths with divert angles of less than 20° take up far more space than those angled at 20° or more. This steers one of ordinary skill in the art away from trying and using lower divert angles for divert guide path entrances. In other words, one skilled in the art having the teachings of Kelsey (i.e., allegedly teaching a guide path having an entrance disposed at an angle of no more than about 20°) would not likely try angles of less than 20°. Rather, the skilled artisan would simply use the 20° divert angle explicitly shown in Kelsey. The drawbacks of using divert angles of less than 20° (i.e., absorbing too much floor space) would deter one skilled in the art from trying and using such angles.

Moreover, conventional divert guide paths of 20° are compatible with existing conveyor systems and their components (e.g., switches 42 and 44 in Kelsey). Employing divert guide paths having entrances at divert angles of less than 20° necessitates additional engineering considerations for the divert switches (e.g., switch 42) and the return switch (e.g., switch 44). This additional consideration would further steer one skilled in the art away from using a divert guide path entrance disposed at a divert angle of less than 20°.

For all the forgoing reasons, it is respectfully submitted that claim 13 and claims 14-36 dependent therefrom are in condition for allowance.

Dependent claims 14-19: Dependent claims 14-19 respectively call for the recited divert angle of claim 13 to be less than a series of progressively decreasing angles (e.g., claim 14 calls for a divert angle of less than 19°, claim 15 calls for a divert angle of less than 17°, claim 16 calls for a divert angle of less than 15°, and so on). The last of these dependent claims, claim 19, calls for a divert angle of less than 3°. To deal with these claims, the Examiner asserts that “since Kelsey teaches an angle of no more than 20° it is clear to one of ordinary skill in the art that it would be obvious to try angles less than 20°.” First, Applicants challenge the assertion that a teaching of the use of an angle of no more than about 20° somehow renders it obvious to use the recited angles (e.g., an angle of less than 3°). Second, the Examiner has provided no supporting rationale as to why it would be obvious to try ranges less than each of the recited angles, i.e., 19°, 17°, 15°, 10°, 5° and 3°, by one of ordinary skill in the art. In the art of sortation conveyors of the type taught by Kelsey, it is well known that 20° or 30° are standard divert angles. Applicants respectfully submit that the teachings of Kelsey fail to disclose or fairly suggest the recited angles of claims 14-19, the failure incrementally increasing from claim 14 through claim 19 (i.e., the Examiner’s logic breaks down, particularly the further from 20° the recited angle becomes).

Moreover, the recited angles in dependent claims 14-19 relate to the entrance of an arcuate portion of a divert guide path. There is no teaching of an entrance of an arcuate portion of a divert guide path having an divert angle of less than 20° in Kelsey, as the Examiner concedes. Rather, the Examiner appears to be stretching Kelsey in asserting that it renders it somehow inherently obvious to use divert angles of less than 20°, including all of the specific recited angles of claims 14-19, but selectively wishes to modify the teachings of Kelsey with those of Piron. More specifically, the Examiner wants to selectively remove the arcuate teachings of Piron and selectively apply them to Kelsey. Referring to Figure 1 of Piron, the divert angle of the entrance of any disclosed divert guide path does not appear to be as recited in claims 14-19. Applicants challenge the Examiner’s selective modification of Kelsey to include only the arcuate teachings of Piron without importing the specific divert angles of the arcuate entrances taught in Piron.

Dependent claim 23: Dependent claim 23 calls for the divert guide path to include a linear section disposed between the arcuate portion and the associated switch. The Examiner references Figure 9 of Kelsey and indicates that this figure shows a linear section just after the divert switch. Again, this appears to be a selective modification of Kelsey with the teachings of Piron. In particular, the Examiner is taking the arcuate teaching of Piron to modify Kelsey, but not taking the locations of the arcuate sections of Piron and applying those to Kelsey. In reference to claim 23, modifying Kelsey to have a divert guide path as shown in Piron would cause Kelsey to no longer include a linear section just after the divert switch. Rather, as shown in FIGURE 1 of Piron, there would be no linear section disposed between the arcuate portion and the switch. Still further, the Examiner has provided no articulated rationale as to why one skilled in the art would take the curved track of Piron and modify Kelsey upstream of the switch leaving a linear section between the switch and the arcuate portion.

Dependent claims 26-31: Dependent claims 26-31 all depend from dependent claim 23. As already indicated herein, dependent claim 23 calls for the divert guide path to include a linear section disposed between the arcuate portion and the associated switch. Dependent claims 26-31 specify particular divert angles or ranges of angles for the linear section disposed between the arcuate portion and the associated switch. The Examiner argues that Kelsey's teachings would apply to either a linear or an arcuate portion. Applicants respectfully disagree.

First, there is no teaching or fair suggestion of a linear section disposed between an arcuate portion and an associated switch. Even if the combination of Piron and Kelsey were proper, there is simply no disclosure or fair suggestion from the combination of a linear portion disposed between an arcuate portion and a switch. Just because Kelsey teaches a linear portion and the Examiner proposes to modify this linear portion with an arcuate portion, there is no support for the linear portion to remain between the arcuate portion and the switch once Kelsey is modified. Still further, there is no support whatsoever for such a linear portion to be disposed at various divert angles less than the recited angular amounts of claims 26-31 as asserted by the Examiner.

Independent Claim 37 and Its Dependent Claims: Independent claim 37, as amended, calls for an initial contact zone in which one or more of the plurality of pushers are selectively diverted by the switch to travel along the divert guide path to contact associated articles carried by the endless conveying surface, wherein the divert guide path is disposed downstream of the switch and comprises a plurality of divert angles. Additionally, claim 37 calls for the divert guide path to include an initial contact zone portion disposed within the initial contact zone. Applicants respectfully submit that amended claim 37 is neither disclosed nor fairly suggested by the applied references of Kelsey and Piron, whether alone or in combination.

More particularly, Kelsey fails to disclose a divert guide path comprised of a plurality of divert angles wherein the path includes an initial contact zone portion disposed within the initial contact zone. The addition of Piron, which Applicants respectfully submit is improperly combined with Kelsey for reasons discussed in reference to claim 1, fails to disclose or fairly suggest all of the elements recited in claim 37. Specifically, the addition of Piron for its alleged teaching of a divert guide path comprising a plurality of divert angles does not disclose or fairly suggest the limitation of the divert guide path, which is comprised of a plurality of divert guide angles, including an initial contact zone portion disposed within the recited initial contact zone.

Specifically, there is no specific teaching or disclosure of an initial contact zone in Kelsey, though Applicants acknowledge that somewhere along the rail 36 an initial contact zone is included. However, Piron certainly does not include an initial contact zone in which one or more of a plurality of pushers are selectively diverted by a switch to travel along a divert guide path to contact articles carried by an endless conveying surface. Rather, Piron is directed to an entirely different type of conveyor (i.e., a platen conveyor in which articles are supported and carried on platens that move along tracks). Modifying the divert guide path of Kelsey to include a plurality of divert angles as allegedly taught by Piron would not render obvious the inclusion of an initial contact zone in which a contact zone portion of a divert guide path is disposed. In other words, the recited divert guide path comprising a plurality of divert angles, which includes an initial contact zone portion disposed within an initial contact zone, is not taught or suggested by the combination of Kelsey and Piron. Moreover, the Examiner does not appear to address this limitation or issue. Rather, the Examiner simply says that “an initial contact zone would be disposed as claimed as per above.” Certainly this falls below the level of providing articulated reasoning with some rational underpinning to support a legal conclusion of obviousness.

Accordingly, for at least these reasons, claim 37 and claims 38-53, dependent therefrom are in condition for allowance.

Dependent claims 38-43: Dependent claims 38-43 each call for the first portion recited in claim 37 (i.e., an initial contact zone portion comprising a *first portion* which is disposed at a divert angle of less than 20°) to be disposed at a divert angle of less than a particular angular amount. For example, claim 38 calls for the first portion to be disposed at a divert angle of less than 19° and dependent claim 43 calls for the first portion to be disposed at a divert angle of less than 3°, with the intervening dependent claims calling for the divert angle to be disposed at less than particular angular amounts between 19° and 3°. The Examiner references his rejection of claims 14-19 in rejecting claims 38-43. Likewise, Applicants reference their arguments supporting the patentability of claims 14-19 in asserting the patentability of claims 38-43.

To briefly reiterate, Applicants respectfully submit that an alleged teaching in Kelsey of an angle of no more than 20° does not render it obvious to try angles less 20°, including the particular angles claimed in dependent claims 38-43. To highlight the flaw in the Examiner's rationale, Applicants respectfully assert that a teaching of the use of divert angle of no more than 20° cannot be used to support a teaching of a first portion being disposed at a divert angle of less than 3°(i.e., claim 43).

Dependent claims 44-46: Dependent claims 44-46 each respectfully recite various configurations relating to the initial contact zone portion. For example, claim 44 calls for the initial contact zone portion to comprise a linear portion. Claim 45 calls for the initial contact zone to be linear. Claim 46 calls for the initial contact zone portion to comprise a non-linear portion. In rejecting these claims, the Examiner indicates that Figure 7 (of Kelsey) shows an initial linear contact zone, all of the alleged contact zone (of Kelsey) is linear, and indicates that Piron teaches the non-linear arcuate contact zone which is parabolic in nature. These rejections are incongruous with one another. More particularly, to reject claim 44 the Examiner relies on Figure 7 as allegedly showing an initial linear contact zone. However, claim 44 ultimately depends from claim 37. To reject claim 37, the Examiner is reminded that he modified the linear track 36 of Kelsey with the curved track of Piron (though this modification is challenged as discussed hereinabove). Thus, it is unclear to Applicants how the Examiner can continue to rely

on Kelsey as showing an initial linear contact zone post-modification by Piron. In other words, after Kelsey is modified by Piron to include a plurality of divert angles (required to reject claim 37), the Examiner cannot continue to assert that Kelsey shows an initial linear contact zone. The same objections to the Examiner's rejections apply to claim 45. In claim 47, wherein all of the initial contact zone is required to be non-linear, the Examiner reverts back to Piron. Now, suddenly the Examiner is relying on his modification of Kelsey by Piron for the alleged teaching of a non-linear arcuate contact zone. Applicants challenge the Examiner's rejection of claims 44-46 on at least this basis.

Independent Claim 174 and Its Dependent Claims: Independent claim 174 calls for a sortation conveyor comprising a divert guide path associated with a last switch, wherein the divert guide path comprises an arcuate portion having an entrance that is disposed at a divert angle of less than 20°. As discussed in reference to claim 13, the combination of references applied against claim 174 in the rejection thereof (i.e., Kelsey and Piron) fails to disclose or fairly suggest this limitation of claim 174 and the combination is not a proper one. As already discussed, the Examiner relies on a tenuous reading of Kelsey to argue that it discloses divert guide paths having entrances disposed at divert angles of less than 20°. Applicants challenge this reading of Kelsey. In particular, Applicants challenge that the "no more than" language of Kelsey renders it inherently obvious that angles less than 20° are disclosed or fairly suggested by Kelsey. Second, Applicants argue that any suggestion in Kelsey of a divert guide path entrance being disposed at every angle of less than 20° is somewhat irrelevant in that the divert guide path of Kelsey is modified, according to the Examiner, by the teachings of Piron so as to be arcuate. In modifying the divert guide path of Kelsey to be arcuate, the Examiner has not shown how the arcuate portion of the divert guide path still is suggested to be disposed at a divert angle of less than 20°. Additionally, for all the reasons discussed in reference to claim 13, Applicants again assert that the combination of Kelsey and Piron is improper. The arguments provided against the combination of Kelsey and Piron in reference to claim 13 are incorporated herein by reference.

For at least the foregoing reasons, Applicants respectfully submit that claim 174 is in condition for allowance.

Independent Claim 175 and Its Dependent Claims: New independent claim 175, which falls within the elected species or invention, parallels original claim 13 and dependent claims 33 and 34. These dependent claims were indicated as containing allowable subject matter; therefore, it is respectfully submitted that new independent claim 175 is in connection for allowance.

Independent Claim 176 and Its Dependent Claims: New independent claim 176, which falls within the elected species or invention, parallels the limitations contained in independent claim 37 and dependent claim 49, including those of the intervening dependent claims (i.e., claims 46 and 48). Dependent claim 49 was indicated as containing allowable subject matter; therefore, it is respectfully submitted that new claim 176 is in condition for allowance.

Commercial Success

Turning to the appropriateness of the obviousness rejections of the pending claims, Applicants note that, in determining whether a patent claim would be obvious over the prior art, it is necessary for the Examiner to consider and evaluate evidence of commercial success of a product embodying the claimed invention, to the extent that such evidence is present. MPEP § 2142(III). In this case, Applicants have filed a declaration under 37 C.F.R. §1.132 traversing the obviousness rejections on the basis of evidence of commercial success of a product embodying the elected claims. As set forth in the declaration, the Intellisort sorter, a product embodying the invention recited in at least the identified elected claims, has experienced tremendous commercial success. This commercial success is directly derived from the performance of the Intellisort sorter, particularly the ability of the Intellisort sorter to maintain control at higher throughput rates as well as to provide improved control at lower throughput rates, which results from the configuration of the Intellisort sorter, which falls within the scope of at least the identified elected claims, and is not the result of heavy promotion or advertising, a shift in advertising, consumption by purchasers normally tied to the applicants, or other business events extraneous to the merits of the claimed invention. Therefore, the rejections of the pending claims based on the combination of Kelsey and Piron should be withdrawn as the non-obviousness of the elected claims is shown by evidence of commercial success.

CONCLUSION


All formal and informal matters having been addressed, it is respectfully submitted that this application is in condition for allowance. If the Examiner is of the view that all of the pending claims of the application are not in clear condition for allowance, it is requested that the Examiner telephone the undersigned for purposes of conducting a telephone interview to resolve any differences. Accordingly, an early notice of allowance is earnestly solicited.

Respectfully submitted,

FROST BROWN TODD LLC

March 25, 2008
Date


Edwin R. Acheson, Jr., Reg. No. 31,808
2200 PNC Center
201 East Fifth Street
Cincinnati, OH 45202
(513) 651-6708

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